Amendments to the Claims:

1. (Currently Amended) A method of transmitting a radio signal, the method comprising implementing a protocol stack having at least a physical layer and a medium access control layer, the medium access control layer directing data from ~~at least one~~ an application to a plurality of transport channels, the data belonging to any of a plurality of classes for which different qualities of service are required, the transport channels being selected in accordance with ~~a bit~~ the class ~~of~~ to which the data belongs,

processing each transport channel in accordance with a processing scheme dependent upon the ~~bit class~~ nature of the application, and multiplexing the transport channels to produce a physical layer signal, wherein a code identifying each transport channel processing scheme is included in said physical layer signal.

2. (Previously Presented) A method according to claim 7, wherein said physical layer signal comprises a TDMA signal and said code is transmitted in predetermined locations.

3. (Original) A method according to claim 2, wherein said code is distributed across a plurality of bursts.

4. (Currently Amended) A radio transmitter comprising radio transmitting circuitry and processing means, the processing means being configured to implement a protocol stack having at least a physical layer and a medium access control layer ~~including~~ for directing data from an application to a plurality of transport channels, ~~each carrying~~ the data ~~of a particular bit class, which are~~ belonging to any of a plurality of classes for which different qualities of service are required, wherein the transport channels are arranged to be selected in accordance with the class to which the data belongs, and to be multiplexed to produce a physical layer signal, each transport channel ~~being~~ arranged to be processed in accordance with a processing scheme dependent upon the ~~bit class~~ nature of the application, wherein the processing means is configured to include a code identifying ~~said selected manners~~ each transport channel processing scheme in said physical layer signal.

5. (Previously Presented) A radio transmitter according to claim 11, wherein said physical layer signal comprises a TDMA signal and said code and said code is transmitted in predetermined locations.

6. (Original) A radio transmitter according to claim 5, wherein said code is distributed across a plurality of bursts.

7. (Previously Presented) A MAC layer for use in the method of claim 1.

8. (Previously Presented) A physical layer for use with the MAC layer of claim 7.

9. (Previously Presented) A physical layer according to Claim 8, in which the processing schemes are specified at call set-up when the radio signal is for use in a mobile communications system.

10. (Cancelled)

11. (Currently Amended) A MAC layer for use in the method of claim ~~10~~ 1.

12. (Previously Presented) A physical layer for use with the MAC layer of claim 11.

13. (Previously Presented) A physical layer according to Claim 12, in which the processing schemes are specified at call set-up when the radio signal is for use in a mobile communications system.

14. (Previously Presented) A MAC layer implemented in the radio transmitter of claim 4.

15. (Previously Presented) A physical layer for use with the MAC layer of claim 14.

16. (Previously Presented) A physical layer according to claim 15, in which the processing schemes are arranged to be specified at call set-up when the radio signal is for use in a mobile communications system.

17. (Cancelled)

18. (Currently Amended) A MAC layer implemented in the radio transmitter of claim ~~17~~ 4.

19. (Previously Presented) A physical layer for use with the MAC layer of claim 18.

20. (Previously Presented) A physical layer according to claim 19, in which the processing schemes are arranged to be specified at call set-up when the radio signal is for use in a mobile communications system.